

# Exhibit 4



## N-Nitrosodiethylamine

CASRN 55-18-5 | DTXSID2021028

- [IRIS Summary \(PDF\)](#) (11 pp, 106 K)

[Key IRIS  
Values](#)

[Other EPA  
Information](#)

### Noncancer Assessment

[Reference Dose for Oral Exposure \(RfD\) \(PDF\)](#) (11 pp, 106 K)

Not assessed under the IRIS Program.

Last Updated:

[Reference Concentration for Inhalation Exposure \(RfC\) \(PDF\)](#)

(11 pp, 106 K)

Not assessed under the IRIS Program.

### Cancer Assessment

[Weight of Evidence for Cancer \(PDF\)](#) (11 pp, 106 K)

Last Updated: 01/31/1987

<b>WOE Characterization</b>	<b>Framework for WOE Characterization</b>
B2 (Probable human carcinogen - based on sufficient evidence of carcinogenicity in animals)	Guidelines for Carcinogen Risk Assessment (U.S. EPA, 1986)

**Basis:**

- Induction of tumors at multiple sites in both rodent and nonrodent species exposed by various routes.
- This may be a synopsis of the full weight-of-evidence narrative.

**Quantitative Estimate of Carcinogenic Risk from Oral Exposure**  
(PDF). (11 pp, 106 K)

**Oral Slope Factor:**  $1.5 \times 10^2$  per mg/kg-day

**Drinking Water Unit Risk:**  $4.3 \times 10^{-3}$  per  $\mu\text{g/L}$

**Extrapolation Method:** Weibull, extra risk

**Tumor site(s):** Hepatic

**Tumor type(s):** Liver tumors (Peto et al., 1984)

**Quantitative Estimate of Carcinogenic Risk from Inhalation**  
**Exposure** (PDF). (11 pp, 106 K)

**Inhalation Unit Risk:**  $4.3 \times 10^{-2}$  per  $\mu\text{g/m}^3$

**Extrapolation Method:** Weibull, extra risk

**Tumor site(s):** Hepatic

**Tumor type(s):** Liver tumors (Peto et al., 1984)

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## Related Links

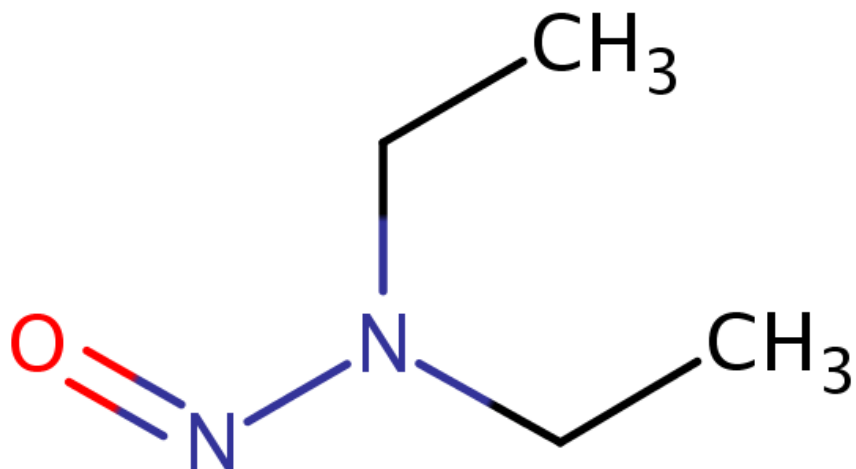
- [EPA Chemicals Dashboard - N-Nitrosodiethylamine](#)

## Tumor Sites



Hepatic

## Chemical Structure for N-Nitrosodiethylamine



## Synonyms

- Dana: den
- Dena
- Diaethylnitrosamin
- Diethylamine, n-nitroso
- Diethylnitrosamine

[more synonyms](#)

LAST UPDATED ON {MONTH DAY, YYYY}

